

10-31-12

SOLVING MULTIPLICATION & DIVISION EQUATIONS

2 Ways to Solve:

① Use inverse operation

or

② Multiply both sides of the equation by the reciprocal of the # w/ the variable

* * Multiplication equations have the # & variable side-by-side, # 1st

Ex: $15x = 45$

* * Division equations use — for division sign

Ex: $\frac{y}{2} = 100$

Ex: $15x = 45$

$\frac{15x}{15} = \frac{45}{15}$

← Divide both sides by 15

$x = 3$

$$\text{EX: } \frac{y}{2} = 100$$

$$\frac{2}{1} \cdot \frac{y}{2} = 100 \cdot 2 \quad \leftarrow \begin{array}{l} \text{Multiply both sides} \\ \text{by } 2 \end{array}$$

$$y = 200$$

$$\text{EX: } 12x = 60$$

$$\frac{12x}{12} = \frac{60}{12}$$

$$x = 5$$

$$\text{EX: } \frac{m}{2} = 26$$

$$\frac{2}{1} \cdot \frac{m}{2} = 26 \cdot 2$$

$$m = 52$$

$$\text{EX: } \frac{2}{3}x = 10$$

$$\frac{3}{2} \cdot \frac{2}{3}x = \frac{10}{1} \cdot \frac{3}{2}$$

$$x = 15$$

$$\text{Ex: } \frac{1}{3} \cdot \frac{14}{3} = 99 \cdot \frac{3}{1}$$

$$y = 297$$

AREA & ALGEBRAIC EQUATIONS

Formula : $A = lw$

** Plug in the #s you know.

This will give you an algebraic equation
(the variable is the missing #).

Then solve as normal

Ex: $w = 4$ $A = 28 \text{ in}^2$
 $l = ?$

$$A = lw$$

$$\frac{28}{4} = \frac{4l}{4}$$

$$7 = l$$